

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): A film preparation method for preparing an oxygen radical-containing calcium aluminate film, characterized in that it comprises comprising
subjecting to thermal spraying a powder of comprising an oxygen radical-containing calcium aluminate to thermal spraying comprising powdered crystalline
 $12\text{CaO}\cdot 7\text{Al}_2\text{O}_3$ (C_{12}A_7) having an oxygen radical content of at least 10^{20} cm^{-3} , where the thermal spraying melts the powder only at the surface of the powder or in the vicinity of the surface of the powder; and
depositing the thermally sprayed powder onto a substrate as a film comprising deposited crystalline $12\text{CaO}\cdot 7\text{Al}_2\text{O}_3$ (C_{12}A_7) having an oxygen radical content of at least 10^{20} cm^{-3} .

Claims 2-3 (Canceled)

Claim 4 (Currently Amended): The method according to Claim ~~[[3]]~~ 1, wherein the powdered crystalline $12\text{CaO}\cdot 7\text{Al}_2\text{O}_3$ (C_{12}A_7) is obtained by a solid phase reaction of a Ca source and an Al source in a mol ratio of Ca:Al being from 0.77:1 to 0.96:1.

Claim 5 (Original): The method according to Claim 4, wherein the solid phase reaction is carried out in a dry oxidizing atmosphere having an oxygen partial pressure of at least 10^4 Pa, a steam partial pressure of at most 10^2 Pa and a temperature of from 1,200 to 1,415°C, or after the solid phase reaction, the system is maintained in such a dry oxidizing atmosphere.

Claim 6 (Currently Amended): The method according to any one of Claims 1 [[to]] ,
4 and 5, wherein the thermal spraying is carried out by plasma spraying.

Claims 7-10 (Canceled)

Claim 11 (New): The method according to Claim 1, wherein the powder subjected to
thermal spraying consists of the oxygen radical-containing calcium aluminate.

Claim 12 (New): The method according to Claim 1, wherein the oxygen radical-
containing calcium aluminate further comprises at least one selected from the group
consisting of $3\text{CaO}\cdot\text{Al}_2\text{O}_3(\text{C}_3\text{A})$, $\text{CaO}\cdot\text{Al}_2\text{O}_3(\text{CA})$, $\text{CaO}\cdot 2\text{Al}_2\text{O}_3(\text{CA}_2)$ and $\text{CaO}\cdot 6\text{Al}_2\text{O}_3(\text{CA}_6)$.

Claim 13 (New): The method according to Claim 11, wherein the oxygen radical-
containing calcium aluminate further comprises at least one selected from the group
consisting of $3\text{CaO}\cdot\text{Al}_2\text{O}_3(\text{C}_3\text{A})$, $\text{CaO}\cdot\text{Al}_2\text{O}_3(\text{CA})$, $\text{CaO}\cdot 2\text{Al}_2\text{O}_3(\text{CA}_2)$ and $\text{CaO}\cdot 6\text{Al}_2\text{O}_3(\text{CA}_6)$.